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10/580,028

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EXAMINER

KILPATRICK, BRYAN T

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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,028	Applicant(s) BUSCH ET AL.	
	Examiner BRYAN T. KILPATRICK	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 1-38, 56 and 62-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-55, 57-61 and 72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Amendments filed 11 March 2009 have been fully considered.
2. Instant claims 39-55, 57-61 and 72 are pending; instant claims 1-38, 56, and 63-71 have been cancelled by Applicant's amendment.
3. The rejection under the second paragraph of 35 U.S.C. 112 is withdrawn.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 39-62 and 72, drawn to an apparatus having a light source, light detection, and a titration system.

Group II, claim(s) 63-71, drawn to a method having a crystallization system.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of Group I is the combination of a light source and detection component with a titration system. The use of the combination cannot be a

Art Unit: 1797

special technical feature under PCT Rule 13.2 because the combination is known in prior art. U.S. Patent 3,481,707 (BRODKORB et al.) discloses in the Abstract the use of a colorimetric apparatus using titration with a light source and light sensing system comprised of color filters, photoelectric cells, and the monitoring of potential.

Applicant's election without traverse of **Group I, claims 39-62 and 72** in the reply filed on November 24, 2008 is acknowledged. Claims 63-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 24, 2008.

Currently in the set of claims filed 11 March 2009 in response to the Office action filed 11 December 2008, Applicant's amendment to instant claim 62 recites the substance of previously recited instant claim 63, the nonelected invention of the Response to the Election/Restriction filed on 24 November 2008. Therefore, **amended instant claim 62 is held as withdrawn** in light of Applicant's election in the reply filed on 24 November 2008.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 39-55, 57-61 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,402,241 (US'241) in view of U.S. Patent 5,181,082 (US'082).

Instant claim 39 recites an apparatus comprised of a light source, light sensor, a measuring head having an optical fiber and recess, a titration system, and a drive device. US'241 discloses a probe having light from a radiant energy source in line 1 of column 3, a radiant energy detector in line 5 of column 3, a probe in Figures 1 through 20 (similar to the measuring head) that has fiber optics first disclosed in lines 34-37 of column 2, and ports (similar to the recess) are disclosed in lines 62-68 of column 6.

Art Unit: 1797

US'241 discloses an optical probe that can be adapted for permanent mounting in lines 50-51 of column 8, but does not explicitly disclose a titration system with a drive device. However, US'082 discloses the use of a titration analyzer in the Abstract. At the time of the invention, it would have been obvious to one of ordinary skill in the art to employ the titration system of US'082 with the probe of US'241 for the purpose of analysis such as measuring free fatty acid content in edible oil as disclosed in the Abstract of US'082. In addition, the modification of US'241 with US'082 discloses the claimed invention except for the drive device; it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a drive device to move a probe for the purpose of automating analysis of samples since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. (*In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958); MPEP 2144.04, III. Automating a Manual Activity)

Instant claim 40 recites a system for measuring pH. Instant claim 41 recites a system for measuring temperature. US'082 discloses pH observation in lines 10-21 of column 15 and temperature observation in lines 16-23 of column 10.

Instant claim 42-43 recites a fluidics system for moving an amount of liquid for examination and calibrating with a liquid, respectively. US'082 discloses in lines 41-47 of column 4 a sample chamber with vent ports, drain ports, and valves for moving fluids. US'082 discloses calibrating with a liquid in lines 21-31 of column 15.

Instant claim 44 recites a fluidics system with a cleaning means. US'241 discloses improvements that enable easy cleaning in lines 65-67 of column 3.

Instant claim 45 recites an exchangeable sample vessel for receiving liquid samples. US'241 discloses a process vessel in line 10 of column 3.

Instant 46 recites a sample-receiving region where the sample vessel can be arranged below the measuring head. US'082 discloses in Figures 16-18 a probe lowered into a vessel located beneath it.

Instant claim 47 recites a sample-receiving region constructed of stainless steel, titanium oxide, or stainless steel with titanium oxide coating. US'241 discloses the sample fluid can be provided in a vessel or line (pipe) in lines 1 of column 12. Examiner take the position that the line or vessel disclosed by the prior art is not limited to any particular metal or nonmetal material absent any contrary evidence.

Instant claim 48 recites the sample-receiving region has a device that disinfects using UV light. The optical probe of disclosed by US'241 in the Title and Abstract radiates UV light that capable of disinfect material.

Instant claim 49 recites a rotatable sample plate with an indirect drive for the sample vessel. US'241 discloses a natural process vessel in line lines 9-10 of column 3 and lines 32-40 of column 14 disclose a technique for mixing a fluid sample in the probe sample chamber and bulk sample in a vessel.

Instant claim 50 recites the measuring head is a disposable article. US'241 discloses in lines 27- 29 of column 1 improvements used to improve maintainability of the probe, which anticipates the disposal of the probe.

Instant claim 51 recites a device that detects a measuring head has been used. US'082 discloses a radiant energy detector in line 37 of column 3. Examiner takes the position that the detector needs the probe or measuring head in order to function.

Instant claim 52 recites a holding device for holding on a socket. Instant claim 53 recites an integral connection component with a set of breaking point as a holding means. US'241 discloses the use of connecting segments using a sealing manner such as welding or adhesives in lines 7-11 of column 6.

Instant claim 54 recites a measuring head that conveys light received from the light source to the light sensor. Instant claim 55 recites the measuring head conveys light received by the light source along a light path adjacent to which the sensor is arranged. Instant claim 57 recites the fluid duct of a fluidic system is in the measuring head. Instant claim 58 recites the fluid duct has a sealing stopper. Instant claim 72 recites a measuring head with a recess that reduces inaccuracy of measurements. US'241 discloses in line 63 of column 2 through line 5 of column 3 a probe that directs light off-axis from a radiant energy source to a sample chamber where the light interacts with a test fluid, and then is detected by a radiant energy detector. US'241 discloses upper and lower vent and drain ports, and a valve means for closing the lower side port or ports in lines 58-64 of column 3. US'241 discloses improvements in efficiency and reliability to the claimed probes in Technical Field section, lines 14-29 column 1.

Instant claim 59 recites the titration system has a fluid duct in the measuring head. US'082 discloses the use of a titration analyzer in the Abstract. US'082

Art Unit: 1797

discloses in lines 41-47 of column 4 a sample chamber with vent ports, drain ports, and valves for moving fluids.

Instant claim 60 recites a stirring device for stirring the liquid sample. US'241 discloses in lines 32-40 of column 14 a technique for mixing a fluid sample in the probe sample chamber and bulk sample in a vessel.

Instant claim 61 recites a flow blade as a flow component. US'241 discloses in lines 40-49 of column 14 the use of a chamber wall with a flowing fluid as well as a stilling valve to affect a flowing fluid to reduce disturbances caused by bubbles.

Response to Arguments

Applicant's arguments filed 11 March 2009 have been fully considered but they are not persuasive.

Applicant states in the second paragraph on page 11 of the Remarks that, "There is no disclosure or suggestion in US'241 and US'082 of a drive device for moving the measuring head, *i.e.*, the optical probe, relative to the sample vessel, *i.e.*, the titration vessel." As stated in the current Office action, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a drive device to move a probe in relation to a sample for the purpose of automating analysis of samples since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. (*In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958); MPEP 2144.04, III. Automating a Manual Activity)

Art Unit: 1797

Applicant states in the second paragraph on page 12 of the Remarks that, "US'241 and US'082, either considered independently or combined, also does not disclose or teach "at least a part of a determining device (2, 3, 5, 6.1, 6.2, 12, 13) being provided for determining a liquid level of the liquid sample," as recited in independent claim 39." This limitation is inherent of the probe disposed into a sample for analysis. The probe has to be disposed into a sample for analysis; if it were not able to be disposed into a sample, then the probe would not be able to collect data for a sample being analyzed.

Applicant states in the third paragraph on page 12 of the Remarks that, "The ports disclosed in US'241 (and US'082) with respect to the optical probes 48, 100 are part of the fluid passage way of the liquid sample to be measured and therefore serve a different function than the claimed recess (5)." The ports disclosed in lines 62-68 of column 6 are apart of the probe, similarly to how the recess is apart of the measuring head; the limitation is met by the prior art.

Applicant states in the first paragraph on page 13 of the Remarks that, "Therefore, lowering of the optical probe 100 into the titration vessel 110 is not taught by US'082, and the vessel in US '082 is not "lower than the probe" as recited in claim 46." US'082 discloses in Figures 16-18 a probe lowered into a vessel located beneath it. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a drive device for the purpose of moving a probe as part of automating the analysis of samples since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result

Art Unit: 1797

involves only routine skill in the art. (*In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958); MPEP 2144.04, III. Automating a Manual Activity)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. YAMAZOE et al. discloses dip probe system in for moving a probe in and out of a sample container before and after analysis (col. 7, line 43 - col. 9, line 28).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1797

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN T. KILPATRICK whose telephone number is (571)270-5553. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel P Siefke/
Primary Examiner, Art Unit 1797

BK
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